

REMARKS

This Application has been carefully reviewed in light of the Office Action mailed October 1, 2009. At the time of the Office Action, Claims 1-9 and 12-16 were pending in this Application, all of which were rejected. Claims 1, 4, 5, 8, and 12-14 are herein amended. Claims 10 and 11 were previously cancelled without prejudice or disclaimer. Applicants respectfully request reconsideration and favorable action in this case.

Examiner Interview

Attorney for Applicants, Eric Grabski, conducted a brief telephone conversation with Examiner Tietjen on October 6, 2009 regarding this application. The Examiner indicated that she had recently mailed the current October 1, 2009 Office Action, but discussed possible features in the claims that could be amended to help differentiate from the cited references. Although the Examiner did not propose specific claim amendments, the claim amendments herein were made in light of the suggestions provided by the Examiner. Mr. Grabski thanks the Examiner for her consideration during the telephone discussion.

Rejections under 35 U.S.C. § 112 (indefiniteness)

Claims 1-9 and 12 are rejected under 25 U.S.C. 112, second paragraph as being indefinite. In particular, the Examiner identifies indefinite language in Claims 1, 8, and 12. , Applicants have amended Claims 1, 8, and 12 to address these rejections. Thus, Applicants request that these rejections be withdrawn.

Rejections under 35 U.S.C. §§ 102 and 103

Claims 1-5, 8, 9, and 13 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. patent 4,813,601 issued to Schwerdt et al. ("*Schwerdt*").

Claims 1-5, 8, 9, 12, and 13 were rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,685,105 issued to Ruehle et al. ("*Ruehle*") in view of U.S. Patent 6,461,695 issued to Schaap. ("*Schaap*").

Claim 14 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Schwerdt* in view of U.S. Patent 4,396,450 issued to Blenner et al. ("*Blenner*").

For prior art based rejections under either 35 U.S.C. §102 or 35 U.S.C. §103, the prior art reference(s) much teach every limitation of the claim at issue. Regarding rejections under 35 U.S.C. §102, “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Similarly, regarding rejections under 35 U.S.C. §103, in order to establish a prima facie case of obviousness, the references cited by the Examiner must disclose all claimed limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Applicants respectfully submit that none of the cited references (“*Ruehle*, *Schaap*, *Schwerdt*, and *Blenner*), alone or in combination, teach every element of Applicants’ claims as amended, as discussed below.

Amended Claim 1 is allowable over the cited references.

Amended Claim 1 recites:

an elastomer, which is inserted between the first and second body in the recess and thus in this area, closes and seals the space between the first and second body, wherein the elastomer comprises:

a first side;

a second side opposite the first side;

an outer circumferential surface located generally between the first and second sides and forming a seal with the first body;

an inner circumferential surface located generally between the first and second sides and forming a seal with the second body; and

a first groove formed in the first side of the elastomer and spaced apart from the outer circumferential surface of the elastomer, the first groove extending at least partly along the recess while located at a distance from the wall of the recess;

a second groove formed in the first side of the elastomer;

a fluid chamber defined between the first plunger and the elastomer seal, wherein the elastomer seal prevents fluid in the fluid chamber from flowing past the elastomer seal and out of the fluid chamber, wherein **the first side of the elastomer seal including the first and second grooves faces into the fluid chamber such that fluid pressure in the fluid chamber acts on the grooves to increase the sealing force of the elastomer seal;**

Schwerdt does not teach these limitations. In particular, *Schwerdt* does not include two grooves formed in a side of an elastomer seal that faces a fluid chamber such that fluid pressure in the fluid chamber acts on the grooves to increase the sealing force of the elastomer seal. Even assuming for the sake of argument that *Schwerdt* does include first and second grooves, the first and second grooves identified by the Examiner in Figure 3 of *Schwerdt* (see Office Action, page 5) face away from fluid subchamber 6.6.1, which is located on the opposite side of the sealing element 6.2.6. The side of sealing element 6.2.6 facing fluid subchamber 6.6.1 clearly includes only a single groove, as shown in Figure 3 of *Schwerdt*. Thus, *Schwerdt* fails to teach first and second grooves formed in a side of an elastomer seal that faces a fluid chamber such that fluid pressure in the fluid chamber acts on the grooves to increase the sealing force of the elastomer seal, as recited in amended Claim 1.

Ruehle also does not teach these limitations of amended Claim 1. First, the Examiner attempts to equate corrugated pipe 22 of *Ruehle* with the elastomer seal recited in Claim 1. (Office Action, page 9). Applicants do not agree that these elements can be equated. However, even assuming that corrugated pipe 22 and the claimed elastomer seal could be equated, the “1st groove” in pipe 22 indicated by the Examiner is formed in the outer circumferential surface of pipe 22. Amended Claim 1 recites an elastomer seal having a first side, an opposite second side, “an outer circumferential surface located generally between the first and second sides and forming a seal with the first body”, and “a first groove formed in the first side of the elastomer and spaced apart from the outer circumferential surface of the elastomer.” The alleged “1st groove” in pipe 22 is clearly not “formed in the first side of the elastomer and spaced apart from the outer circumferential surface of the elastomer.”

Schaap and *Blenner* also fail to teach these limitations of amended Claim 1.

For at least these reasons, Applicants respectfully request reconsideration and allowance of amended Claim 1, as well as all claims that depend therefrom.

Amended independent Claims 13 and 14 are allowable over the cited references.

Amended Claim 13 recites:

a first tubular body rigidly coupled to or integral with the housing;
a second body positioned inside the first tubular body . . .
an elastomer seal positioned between the first tubular body and the second body ...
a tensioning means configured to support the elastomer seal between the first tubular body and the second body rigidly coupled to or integral with the first plunger, **the tensioning means acting on the elastomer seal but not acting on the first or second bodies.**

Schwerdt does not teach these limitations. In particular, *Schwerdt* does not teach a tensioning means that acts on an elastomer seal but not the first or second bodies. The Examiner alleges that *Schwerdt* teaches “a tensioning means (4.2 acts on top side and 3.3 acts on lower side) configured to support the elastomer seal (6.2.6) between the first tubular body ... and the second body (6.2.5) ...” (Office Action, page 6). However, as shown in Figure 3 of *Schwerdt*, both of these alleged tensioning means -- “tappet 4.2” and “valve spring 3.3” -- act on the alleged second body (pressure plate 6.2.5). *Schwerdt* does not teach a tensioning means that acts on sealing element 6.2.6 but not on the alleged first or second bodies.

Ruehle suffers from the same deficiency. The Examiner alleges that *Ruehle* teaches “a tensioning means (8) configured to support the seal (22) between the first tubular body and the second body ...” (Office Action, page 10). First, as discussed above, the Examiner attempts to equate corrugated pipe 22 of *Ruehle* with the elastomer seal recited in Claim 1. (Office Action, page 9), which Applicants do not agree can be equated. However, even assuming that corrugated pipe 22 and the claimed elastomer seal could be equated, pre-tension spring 8 does not act on corrugated pipe 22. Rather, pre-tension spring 8 acts to pre-tension elements 3 of piezo actuator 2 (*Ruehle*, col. 2, lines 42-45). Even if pre-tension spring 8 acted in the direction away from piezo actuator 2, it would act on both corrugated pipe 22 and the Examiner’s alleged “second body” (intermediate piece 25). In any event, it cannot be argued that pre-tension spring 8 acts on corrugated pipe 22 but not the alleged “second body” (intermediate piece 25).

Schaap and *Blenner* also fail to teach these limitations of amended Claim 13.

For at least these reasons, Applicants respectfully request reconsideration and allowance of amended Claim 13, as well as all claims that depend therefrom.

In addition, amended Claim 14 is allowable for analogous reasons. For example, amended Claim 14 recites “configuring a spring to act on a side of the elastomer to support the elastomer in the space between the first body and the second body, the spring acting on the elastomer seal but not acting on the first or second tubular bodies.” Based on the reasons discussed above, the cited references do not teach these limitations. Thus, Applicants respectfully request reconsideration and allowance of amended Claim 14.

CONCLUSION

Applicants have made an earnest effort to place this case in condition for allowance in light of the remarks set forth above. Applicants respectfully request reconsideration of the pending claims.

Applicants believe no fees are due; however, should the Commissioner deem that any additional fees are due, including any fees for any additional extensions of time, the Commissioner is hereby authorized to debit said fees from deposit account number 50-4871.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicants' attorney at 512-457-2030.

Respectfully submitted,
KING & SPALDING LLP

EMall.

Attorney for Applicants
Eric M. Grabski
Registration No. 51,749

Date: 11/3/09

SEND CORRESPONDENCE TO:

KING & SPALDING L.L.P.

401 Congress Ave., Suite 3200

Austin, TX 78701

CUSTOMER ACCOUNT NO. **86528**

512-457-2030

512-457-2100 (fax)